

104 South Main Street, Suite 700 Greenville, SC 29601

Mailing Address:

Post Office Box 10208 Greenville, SC 29603-0208 Telephone: (864) 255-5400

Fax: (864) 255-5440 Web site: www.wcsr.com 000218101

SDMS DocID

R. Howard Grubbs Direct Dial: (864) 255-5413 I rect Fax: (864) 255-5493 E-nail: hgrubbs@wcsr.com

October 2, 2001

Ms. Wendoly Ortiz Assistant Regional Counsel US Environmental Protection Agency Region I One Congress Street, Suite 1100 (SES) Boston, MA 02114-2023

> Re: Supplemental Request for Information to

Armstrong World Industries, Inc. ("Armstrong") Pursuant to Section 104 of CERCLA for the

Peterson/Puritan, Inc. Superfund Site, Operable Unit 2 which includes

The J.M. Mills Landfill, Cumberland, RI

Dear Ms. Ortiz:

Enclosed please find the response of Armstrong World Industries, Inc. formerly known as Armstrong Cork Company to the August 6, 2001 Request for Supplement II formation. If you have any questions regarding this information, please do not hesitate to give me a call

Very Aruly yours,

WOMBLE CARLYLE SANDRIDGE & RICE Professional Cimited Liability Company

ard Grubbs

RHG:scc Enclosures

Gvl#24731

# ARMSTRONG WORLD INDUSTRIES, INC.'S RESPON SE TO THE USEPA'S SUPPLEMENTAL INFORMATION RECUEST REGARDING THE PETERSON/PURITAN, INC. SITI CUMBERLAND, RHODE ISLAND

Armstrong World Industries, Inc. ("Armstrong") adopts the preamble set forth in its June 19, 2001 response to Ms. Michelle Lauterback (the "June Response") as if fully set forth herein. Again, this response is limited to Armstrong's former Braintree Plant, which is the plant to which this Information Request is addressed. Armstrong again objects to Definitions 3, 4 and 5 requiring that an individual, business entity and/or document respectively provide or contain all of the information set forth in the request. Armstrong believes that identifying the last-known business address, business telephone number, last known home address and home telephone number is unduly burdensome, if not impossible. Additionally, Armstrong has additional documents responsive to this request beyond those provided in the June Response. Those documents are attached hereto. Furthermore, the Braintree facility was closed in 1996 and the product line subsequently sold off.

Without waiving and subject to these objections Armstrong responds as follows:

### **QUESTIONS AND RESPONSES**

1. Information or Knowledge of Waste Delivered to the J.M. Mills Landfill

NOTE: EPA recognizes that in response to the January 28, 2001 Information Request you indicated that you had no knowledge, or reason to know, of any waste from Armstrong Holdings being delivered to the J. M. Mills Landfill. EPA has documentation that waste was transported by Cal's Enterprises of Berkeley, MA from Armstrong's Braintree Plant ("Braintree Plant") to the J.M. Mills Landfill. This documentation indicates that Cal's Enterprises hauled waste from approximately the late 1970's to the early 1980's. Please refer to and provide to EPA any additional information that Armstrong has gathered in its custody, control, or possession that may help respond to the questions below.

- A. Provide all information you have in your custody, control or possession which indicates the kinds of disposal, treatment, storage, or recycling of the wastes generated at the Braintree plant.
  - i. Provide a copy of information related to these practices such as:
    - a. manuals:
    - b. manifests;
    - c. logbook records;
    - d. surveys;
    - e. studies; and
    - f. any type of collection data.

**Response:** Armstrong has no information responsive to this request other than copies of selected "Drivers Daily Reports" from Cal's Enterprises and an index of trip reports provided by USEPA Region I.

- B. Describe the nature of the waste generated at the Braintree Plant, including but not limited to:
  - i. the name of each type of waste;
  - ii. the chemical composition of the contents of each type of waste;
  - iii. the color of each type of waste;
  - iv. the odor of each type of waste; and
  - v. whether each type of waste was hazardous, toxic, flammable, reactive, corrosive, or was otherwise a hazardous substance.

Response: The Braintree facility generated off-spec cork and rubber stock. Other than cork, the majority of the waste was cured rubber products, very often, Armaflex, which was a nitrile PVC (homopolymer) based rubber insulation. Since finished textile and core and rubber product was ground and/or sanded, black dust or powder was generated. Other waste materials were paper bags, fiberboard barrels and corrugated cardboard boxes. These boxes could have contained additives such as "cellogen" (a carbonamide) or other additives, rubber cures, stabilizers, and colorants utilized during the manufacturing process. Rags containing solvents (1,1,1 Trichlorethene, (hereafter "TCE")) were used to degrease and clean machinery. At some point, these rags were recycled and returned to the Braintree plant. Armafle waste was black in color and could, on limited occasion, be gray or green. The cork gasketing was either tan or black in color. The Armaflex cork and rubber waste had an odor similar to that of "rubber bands".

On information and belief, none, of the waste generated during the manufacturing process at the Braintree plant was RCRA hazardous or otherwise a hazardous substance. While rags containing TCE (a hazardous substance) were used to degrease and clean machinery, these rags, at some point, were recycled and returned to the Braintree plant.

## C. State the approximate quantity of the above mentioned wastes generated at the Braintree Plant.

Response: Compactor No.-1 was a 40 yard container and was used for all general plant waste, i.e., paper bags, fiberboard barrels, corrugated packaging materials, and cork/rubber offspec materials. This compactor was emptied approximately once a week. Compactor No.-2 was used to handle Armaflex waste. This waste material was also cured rubber products. It was a 40 yard container and was emptied approximately three times a week. This material was taken (at times) to "Sugarman", a recycler. Compactor No.-3 was used for textile operation (aprons/cots) waste. This waste material was cured rubber products. This was also emptied approximately once a week.

D. Identify all contracts, and parties to contracts, between the Braintree Plant, and any employees thereof, and person(s) responsible for collecting, managing, and or disposing of each type of waste generated at the plant.

**Response:** Armstrong has no documents responsive to this request. Also, see the June Response, 7(i).

- E. For each individual and entity, employed by Cal's Enterprises, which transported waste from the Braintree Plant to the Site:
  - i. identify (see Definitions) each such individual and entity who brought that waste to the Site, including but not limited to each driver and his or her employer;
  - ii. describe the kind of waste brought to the Site by cach individual and entity by date; and
  - iii. describe the quantity of waste brought to the Site by each individual and entity by date.

Response: As noted in its earlier response, Armstrong utilized Cal's Enterprises of Berkley, Massachusetts ("Cal's Enterprises") from 1973 through approximately 1986. This was, on information and belief, a "turnkey" operation with Cal's Enterprises providing the compactors and containers. The various drivers for Cal's Enterprises and waste descriptions are partially identified on the "Driver's Daily Reports" and index furnished by USEPA. These individuals were employees of Cal's Enterprises and not Armstrong; Armstrong has no information regarding these individuals. Also, see Response to 1(C) above. Armstrong has no other information responsive to this request.

F. Identify all persons, including Respondent's current and former employees, who have knowledge or information about the generation, use, purchase, treatment, storage, disposal, placement or other handling of materials at or transportation of materials to, the Site.

**Response:** Armstrong has no information responsive to this request.

- G. Provide copies of all documents which indicate:
  - i. the amounts charged for storage, treatment, placement, and/or disposal of the above mentioned waste;
  - ii. the total annual amount of such charge;
  - iii. to whom those charges were paid;
  - iv. who paid such charges and in what amounts;
  - v. whether the charges were paid in cash at the time of delivery of the above mentioned waste; and
  - vi. whether a receipt was generated for each delivery of the above mentioned waste.

**Response:** Armstrong has no information responsive to this request.

- H. Please describe each and every material used in the production of:
  - i. elastometric rubber insulation;
  - ii. elastometric rubber textile mill supplies commonly known in the trade as "cots and aprons;"
  - iii. elastometric cellular foam insulation;

- iv. cork;
- v. cork gaskets;
- vi. rubber gaskets;
- vii. cork and rubber gaskets; and
- viii. rubberized floor tiles.
- **Response:** \* (i) Nitrile rubber, plasticizers, trihydrated alumina (fire retardant), cellogen, antimony and carbon black curing package (sulfur accelerators);
- \* (ii) Nitrile rubber, animal glue, clay, and a curing package (primarily sulphur), colorant, plasticizers;
  - \* (iii) See response to (i) above;
    - (iv) Armstrong does not produce cork but uses it as a raw material;
  - \* (v) Rubber and cork;
  - \* (vi) See response to (v) above;
  - \* (vii) See response to (v) above;
  - \* (viii) Armstrong has no information responsive to this reducts as this product line was discontinued in 1968. Once closed down it was never made again by the company.
  - \* These products may contain minute quantities of all of the raw materials listed in the June Response, 5(e). Also, see Attachment "B" which is a Purchasing List Index from the Braintree Plant.
  - I. Furthermore describe the process by which each of the above items is made.

**Response:** Armstrong has no information responsive to this request regarding rubberized floor tiles. All of the above remaining products were essentially mixed at temperature, shaped (extruded either in sheets or tubes), cured, and then cured and finished (sarded/ground). Tubes would often be sliced into rings, sheets would be either sold whole or (early on) various size gaskets would be punched. Also, see Armstrong's June Response, 5(b) and 5(e).

- J. In order to completely answer question 1h in the original information request dated Jan. 29, 2001, please describe each and every material found in the following items as reported by drivers from Cal's Enterprises in an official carrier survey (see exhibit 1).:
  - i. black cork insulation;
  - ii. black cork tubes;
  - iii. large sheets of black cork material;
  - iv. black dust;
  - v. dirty rags;
  - vi. cans with unknown residues;
  - vii. cardboard drums that contained some black dust or powder;
  - viii. automotive gaskets; and
  - iv. other assorted shop waste.

### Response:

These notations were made by Cal's Enterprises' employees, not employees of Armstrong. Accordingly, Armstrong does not know precisely what was in the minds of Cal's Enterprises' employees and they, in turn, would be the best source of information responsive to this Request. Armstrong will, however, provide its best understanding of these terms.

- (i) This most probably refers to H(i) above.
- (ii) See H(v)(vi) above;
- (iii) See H(v) above;
- (iv) Armstrong believes that this "black dust" most probably originated from cork and rubber dust that had been milled or grinded from a final product. The "black dust" could be residue from carbon black. See the MSD sheet attached to the June Response;
- (v) Armstrong has no knowledge of what was contained in these rags. As noted in the June Response, some rags were used for wiping machinery as part of routine maintenance. At one point, rags containing TCE were recycled and returned to the plant;
- (vi) Armstrong has no knowledge regarding the "unknown" residues that could be in cans, however, it is possible that the residues were fillers (plasticizers, curing compounds; pigments, and toners) used in the production process. Also, see response to Question 6 from the June Response;
- (vii) This most probably was carbon black or black dust from cured material. See MSD sheet attached to the June Response;
- (viii) The automotive gaskets contained cork and rulber tubing, curing chemicals and plasticizers;
- (ix) This is most probably general plant waste which would include paper bags, fiberboard barrels, corrugated boxes, and cork and rubber scraps.
- K. Please describe the floor tile manufacturing process that took place at the Braintree Plant during the 1950s and 1960s.

**Response:** Armstrong has no information responsive to this request.

L. Please describe each and every material used in the production of floor tiles at the Braintree Plant during the 1950s and 1960s.

**Response:** Armstrong has no information responsive to this request.

- M. Please describe the nature of the waste generated at the Braintree Plant during the floor tile manufacturing process, including but not limited to:
  - i. the name of each type of waste;
  - ii. the chemical composition of the contents of each type of waste;
  - iii. the color of each type of waste;
  - iv. the odor of each type of waste; and

v. whether each type of waste was hazardous, toxic, flammable, reactive corrosive, or was otherwise a hazardous substance.

**Response:** Armstrong has no information responsive to this request.

- N. In order to completely answer question 5h in the original information request dated January 29, 2001, please describe and identify:
  - i. who disposed of the contents of the solid waste dumpsters that were used for small spill cleanup;
  - ii. how were the contents of the solid waste dumpsters disposed of; and
  - iii. where were the contents of the solid waste dumpsters disposed of.

**Response:** See June Response, 7(i) and (r). Plant personnel were charged with sweeping up small spills.

O. Create a schematic diagram or flow chart that fully describes and or illustrate the Respondent's operation from procurement of production materials through production to disposal of waste.

**Response:** Armstrong objects to this request on the grounds that the information sought is beyond the scope of 42 USC § 9604. Without waving its objection, see Attachment B.

P. Create a schematic diagram that indicates which part of Respondent's operations generated each type of waste, including but not limited to, wastes generated by cleaning and maintenance of equipment and machinery and wastes resulting from spills of liquid materials.

**Response:** See response to 1(O) above.

- Q. Define the various units of measure found on receipts from Cal's Enterprises pertaining to waste pick up at Armstrong's Braintree Plant. Include, but do not limit your answer to the volume capacity of each unit and the frequency of disposal pickup of each. In particular define:
  - i. Comp. No-1 (see exhibit 3);
  - ii. Comp. No-2 (see exhibit 4);
  - iii. Comp. No-3;
  - iv. Load (see exhibit 5);
  - v. Open top container (see exhibit 14); and
  - vi. O/T.

**Response:** "Comp. No-1", "Comp. No-2", and "Comp. No-3" were, to Armstrong's best recollection, all 40 yard compactors. Cal's Enterprises would have better knowledge since the compactors belonged to them. "Load" is believed to be a 40 yard container but since the container belonged to Cal's Enterprises and not Armstrong, this is Armstrong's best estimate. Open top container and "O/T" probably relate to an open top container that was provided by Cal's Enterprises for hauling Armaflex scrap. All of these containers were the property of Cal's Enterprises and not Armstrong. Also, see response to 1(C) above.

- R. Provide information regarding the following "Drivers Daily Reports" pertaining to waste generated by Armstrong Cork and picked up at the Braintree Plant by drivers from Cal's Enterprises and disposed of at J.M. Mills Landfill.
  - i. (See exhibit 2) Refer to the Daily Report dated 9/2/78:
    - a. Define "Armstrong Cork rubbish".
  - ii. (See exhibit 3) Refer to the Daily Report dated 10/6/78:
    - a. Explain what is meant by "Empty Armstrong from 10/5/78 at Mills Cumberland"
    - b. Explain what is meant by "Exchange Armstrong Comp. No-1."
    - c. Explain what is meant by "Empty at Mills."
    - d. Define "Comp. No-1."
    - e. What type of materials were stored in "Comp. No-2"?
  - iii. (See Exhibit 4) Refer to the Daily Report dated 11/10/78:
    - a. Explain what is meant by "Exchange Armstrong Comp. No-2."
    - b. Explain what is meant by Empty Armstrong No-1 from 11/9/78 at Mills."
    - c. Define "Comp. No-2."
    - d. What type of materials were stored in Comp. No-2."
  - iv. (See exhibit 5) Refer to the Daily Report dated 11/27/78:
    - a. Explain what is meant by "Take Armstrong load to Mills."
    - b. Explain what is meant by "Pulled by Hand."
    - c. Define "load."
  - v. (see exhibits 6 and 12) Refer to the Daily Reports dated 12/13/78:
    - a. Explain what is meant by "M.T. Armstrong Containers at J.M. Mills."
    - b. Define "M.T."
    - c. Define "Armstrong Container."
  - vi. (See exhibit 7) Refer to the Daily Report dated 12/16/78:
    - a. Explain what is meant by "Armstrong Cork, Braintree, #2 rubbish to Mills."
  - vii. (See exhibit 8 and 13) Refer to the Daily Report dated 1/24/79:
    - a. What is the "pit"?
    - b. Where is the "pit" located?
    - c. What type of container is in the "pit"?
    - d. What materials are in the "pit"?
  - viii. (See exhibit 9) Refer to the Daily Report dated 4/19/79:
    - a. Explain what is meant by "Armstrong Cork on truck from 1/30/79 to J.M. Mills."
  - ix. (See exhibit 10) Refer to the Daily Report dated 4/19/79:
    - a. What is meant by "Roll off empty put on Armstrong Cork #1"?
    - b. What is an "empty" as used in the contest of this report?
    - c. Define "Armstrong Cork #1".
    - d. What type of materials were stored in "Armstrong Cork #1"?
    - e. What is the volume of "Armstrong Cork #1"?

- x. (See exhibit 11) Refer to the Daily Report dated 5/5/79:
  - a. Define "Armstrong Cork #2".
  - b. What type of materials were stored in Armstrong Cork #2"?
  - c. What is the volume of "Armstrong Cork #2"?
  - d. Explain the fire incident.
- xi. (See exhibit 14) Refer to the Daily Report dated 6/18/79:
  - a. What is meant by "Empty Armstrong open-top Container at Mills"?
  - b. Define "open-top container"?
  - c. What is the volume of the "open-top container"?
- xii. (See attached exhibit 15) Refer to the Daily Report dated 6/19/79:
  - a. What is meant by "Exchange Armstrong No-2, Empty at Mills"?
  - b. What is meant by "Exchange Armstrong No-1, Empty at Mills"?
- xiii. (See exhibit 17) Refer to the Daily Report dated 1/26/81:
  - a. What is meant by "Empty Armstrong No-2 from Sugarman to Mills 1/23/81 Load"?
  - b. What is "Sugarman"?
  - c. Where is Sugarman"?
- xiv. (See exhibit 18) Refer to the Daily Report dated 1/27/81:
  - a. What is meant by Empty Armstrong at Sugarman from 1/26/81 to Mills"?

**Response:** All of these entries were made by individuals who were employed by Cal's Enterprises, not Armstrong. Those individuals should be the best source of knowledge responsive to this request. Armstrong will, however, to the best of its ability, provide information it believes is responsive to this request:

i.

a. Armstrong cork rubber is, most probably, scrap cork or rubber.

ii.

- a. Armstrong has no information responsive to this request, however, the entry could mean that Armstrong materials were taken from the Braintree facility to the Mills Landfill on October 5, 1978.
- b. Armstrong has no information responsive to this request, however, "exchange Armstrong Comp. No-1" could refer to an empty compactor being exchanged for a loaded compactor.
- c. Armstrong has no information responsive to this request, however, "empty at mills" could refer to materials taken from the Braintree facility to the Mills Landfill.
- d. "Comp. No-1" probably refers to compactor no. 1.
- e. See response to 1(C) above.

iii.

a. Armstrong has no information responsive to this request, however, "exchange Armstrong Comp. No-2" could mean that an empty compactor was exchanged for a full compactor.

- b. Armstrong has no information responsive to this request, however, "empty Armstrong No. 1 from 11/8/78 at Mills" could mean that the contents from compactor no. 1 (general plant trash) was taken to the Mills Landfill on November 9, 1978.
- c. "Comp. No-2" most probably refers to compactor no. ...
- d. See response to 1(C) above.

iv.

- a. Armstrong has no information responsive to this request, however, it is possible that "Take Armstrong load to Mills" refers to Armstrong materials being taken to the Mills Landfill.
- b. Armstrong has no information responsive to this request, however, "Pulled by hand" could refer to compacted materials that could not easily be dumped from the compactor and, therefore, required separating and removal by manual labor.
- c. "Load" is a term used by Cal's Enterprises employees, not Armstrong, but most probably refers to a full 40 yard container.

v.

- a. Armstrong has no information responsive to this request, however, "M.T. Armstrong Containers at J.M. Mills" probably refers to an Armstrong container emptied at the Mills Landfill.
- b. Armstrong has no information responsive to this request, however, "M.T." most probably refers to "empty".
- c. "Armstrong Container" most probably refers to one of the containers placed by Cal's Enterprises at the Braintree facility for waste disposal.

vi.

a. Armstrong has no information responsive to this request, however, "Armstrong Cork, Braintree, #2 rubbish to Mills" most probably refers to rubbish from compactor no. 2 that was taken to the Mi ls Landfill.

vii.

a,b, c and d – Armstrong has no information responsive to these requests, however, there are no pits located at the former Braintree facility. One of the compactors, however, was in a lowered area so that waste could be easily placed in the top of a container from a loading dock.

viii.

a. Armstrong has no information responsive to this request, however, "Armstrong Cork on truck from 1/30/79 to J.M. Mills" could mean that cork scrap was taken on January 30, 1979 to the Mills Landfill.

ix.

- a. Armstrong has no information responsive to this request, however, "Roll off empty put on Armstrong Cork #1" could mean that an empty roll off container was placed in the area while compactor no. 1 was being emptied.
- b. Armstrong has no information responsive to this request, however, "empty" could mean that an empty 40 yard container was placed in the area of compactor no. 1.
- c. Armstrong has no information responsive to this request, however, "Armstrong Cork #1" most probably refers to compactor no. 1.
- d. See response to 1(C) above.

e. See response to 1(C) above.

х.

- a. Armstrong has no information responsive to this request, however, "Armstrong Cork #2" most probably refers to compactor no. 2.
- b. See response to 1(C) above.
- c. See response to 1(C) above.
- d. Armstrong has no information responsive to this request, however, several times a year a fire in the motor of the compactor, a misplaced cigarette, or a heated product caused a fire to ignite in the compactor. Any fire was normally extinguished with water.

xi.

- a. Armstrong has no information responsive to this request, however, "Empty Armstrong open-top Container at Mills" could refer to an open top container taken to the Mills Landfill.
- b. Armstrong has no information responsive to this request, however, "opentop container" most probably refers to a 40 cubic yard waste container that has no top.
- c. See response to xi(b) above.

xii.

- a. Armstrong has no information responsive to this request, however, "Exchange Armstrong No-2, Empty at Mills" could refer to Cal's Enterprises providing an empty compactor while emptying compactor no. 2 at the Mills Landfill.
- b. Armstrong has no information responsive to this request, however, "Exchange Armstrong No-1, Empty at Mills" could refer to Cal's Enterprises exchanging an empty compactor and taking contents of compactor no. 1 (plant trash) to the Mills Landfill.

xiii.

- a. Armstrong has no information responsive to this request, however, "Empty Armstrong No-2 from Sugarman to Mills 1/23/81 Load" could mean that materials originally taken to Sugarman (a recycler) was then taken to the Mills landfill on January 23, 1981.
- b. Sugarman was a recycler who used Armaflex scrap for carpet backing.
- c. Armstrong has no knowledge of where Sugarman was or is currently located.

xiv.

a. Armstrong has no information responsive to this request, however, "Empty Armstrong at Sugarman from 1/26/81 to Mills" could mean that scrap materials unable to be used by Sugarman were taken to the Mills Landfill on January 26, 1981.

### 2. Compliance with This Request:

a. Describe all sources reviewed or consulted in responding to this request, including but not limited to:

- i. the names of all individuals consulted:
- ii. the current job title and job description each individuals consulted;
- iii. the job title and job description during the period being investigated of each individual consulted:
- iv. whether each individual consulted is a current or past employee of Respondent;
- v. the names of all divisions of Respondent for which records were reviewed:
- vi. the nature of all documents reviewed:
- vii. the location where those documents reviewed were kept prior to review; and
- viii. the location where those documents reviewed are currently kept.

**Response:** Information for this request was provided by Talbert Lauter and Matthew Cook, previously identified in 4(A) and 7(D) of the June Response.

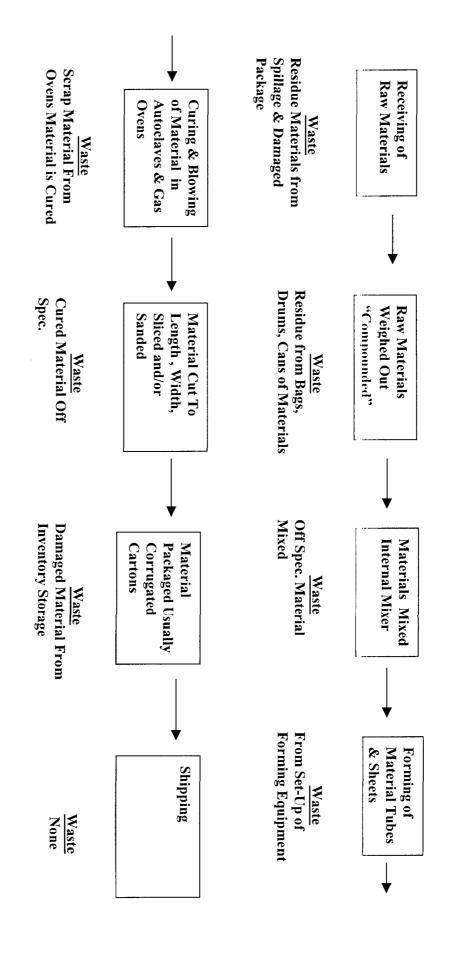
### 3. Information about Others

- a. If not already included in your responses, if you have reason to believe that there may be persons able to provide a more detailed or complete response to any of the parts to this information request or who may be able to provide additional responsive documents, identify such persons and the additional information or documents that they may have
- b. If not already provided, identify all persons, including Respondent's current and former employees, who have knowledge or information about the generation, use, purchase, treatment, storage, disposal, placement or other handling of substances listed in the Survey at the site, or transportation of any of these substances to the Site.

Response: Armstrong has no additional information responsive to this request.

Gvl#25705v1

# ARMAFLEX/TEXTILE/INDUSTRIAL



Top line is responsive to I(O)

Bottom line is responsive to I(P)

В

3/21/90

Braintree Plant

PAGE 1 (101-103)

	USE: A =	ARMAFLEX	I = INDUSTRIAL T = TEXT	(10 [LE	01-103)
*	2 - ANTIOX 3 - BLOWIN 4 - CORK &	(IDANTS NG AGENTS AGENTS AGENTS	8 - MISCELLANEOUS 13 - S GS 9 - PIGMENTS 14 - T 10 - PLASTICIZERS 15 - W	RUBBERS STABILIZERS 'EXTILES-FII (AXES & LUBE	RICANTS
	CODE	USE	NAME	GROUP	SP GR
	101130 101155 101197	AIT	MOLYBDIC ACID/OXIDE ACID STEARIC HYSTRENE 9718 FATTY ACID	8 15 15	3.10 0.85 0.00
	103104	I-T -T-	ANHYDROUS AMMONIA BENZOTHIAZYL DISULFIDE MBTS MASTERMIX HEXA 4924-PD CUMATE	8 5 5 5	0.00 1.51 1.20 1.75
	103122 103128 103130 103133	I-T A-T -T- -I-	DICUP 40C DIPENTAMETHYLENE THIURAM (S) 6 CHEM-MASTER RD-50 DPG	5 5 5 5	1.53 1.53 1.50 1.20
	103184 103185 103201 103254	-I- -T- -A- AIT	CAPTAX SANTOCURE AKROFORM D-201 PELLETS SULFUR RM-99 AC	5 5 5 5	1.50 1.27 1.35 2.04
	103271 103274 103316	T+I -I- A-T	TMTM TMTD ZDMC	5 5 5	1.39 1.42 1.71
	103317 103335 103345	- A - - A - - T -	ZMBT D-201 SLUGS SANTOCURE DISPERSION C-1984	5 5 5	1.70 1.25 1.17
	103357 103364		VANAX NP MONSANTO IPS	5 5	1.35 1.21
	103369 103373 (L) 103375	- A - - T - - A -	ZINC DIMETHYLDITHIOCARBAMATE MASTERMIX 65/35 AKROSPERSE D201 SLABS	5 5 5	1.68 0.00 0.00
	103377	-A-	AKROSPERSE D225-DR POLYDEX B (RMS) 70	5	0.00
	103535 103540	- T - I - T - T	FLEXZONE 3C AMINOX AGERITE SUPERLITE SOLID	2 2 2	1.14 1.13 0.00 1.30
	103581 103582 103583	– T – I – T	AGERITE RESIN D SANTOWHITE CRYSTALS ANTIOXIDANT 588	2 2 2	1.00
			SUNPROOF JR. DOP 688	2 3	0.91 1.00

\* 10/27/87 BRAINTREE PURCHASE SPECIFICATION INDEX

		DILHIN TREE							
	NUMBER		ലാമ	SPEC DATE	ACCEPTANCE	CORP	REVIEW		OBSOLETE
				DAIE		SPEC CPD	DATE	MSDS	DATE
	101130		131	<b>85</b> 0319				X	
	101155		131	820221				X	
	101197		131	841217					
	101302		131	640601	770914	121		Х	
	103104		131	661031				X	
	103115		131	65030 <del>9</del>				Χ	
	103122		131	600524				Χ	
	103128		131	820218					
	103133		131	840308				X	
	103184		131	651104				X	
	103185		131	870223				Χ	
	103254		131	661031				X	
	103271 103274		131	840502 071015				X	
	103274		131 131	871015 820515				X	
	103316		131	600204				X	
	103335		131	870501				X	
	103345		131	760923				X	
	103349		131	770831				X	
*	103353		131	780117				X	1987
	103357		131	840314				X	
	103364		131	840412				X	
	103369		131	830720				^	
	103373		131	870109				X	
	103375		131	850304				^	
	103377		131	<b>85</b> 0312					
	103389		131	861031				X	
	103501		131	5803 <b>05</b>				X	
	103535		131	660920				X	
	103540		131	661103				X	
	103555		131					Χ	1987
	103570		131	<b>9</b> 4 <b>0</b> 326				X	
	103581		131	840423				X	
	103582		131	650811	me of 11:137			X	
V	/103583 /03583		131	871007/	,			X	
X	103590			850130	•			X	
	103597 111144		131 131	810817				X	
	111145		131	850710 850711				X	
	111148		131	861803				X	
	111149		131	800225				X	
	115315		131	650430				X	1987
	115317		131	860612				X X	1987
	115412		131	700626				x	
	115446		131	730419				Ŷ	
	115490		1 Z 1	340113				x	
	117128		131	761207					1987
	117168		131	850211					A # C.
	117175		131	850723				X	
	117181		131	750918				Х	1987
	117188		131	700612					1987
	117197		131	769405 070405				X	
	117000		1,31	G7Ø195				Х	

### **DECLARATION**

I declare under penalty of perjury that I am authorized to respond on behalf of Armstrong World Industries, Inc., and that the foregoing is complete, true, and correct.

Executed on instanto 25, 2001.

Signature A. M. Mariei

Peter A. Scaccia

Type Name

Director, Environment, Health and Safety

Title